



**Froude**

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fact sheet:

## **ag dynamometer systems**



- >> High accuracy
- .....
- >> Low inertia
- .....
- >> Bi-directional
- .....
- >> High reliability
- .....
- >> Easy maintenance
- .....

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Australia, New Zealand, Malaysia, Indonesia, Vietnam, Thailand, Philippines, Singapore

**PROMAND**  
Project Management & Design

# fact sheet:

## ag dynamometer systems

### APPLICATIONS

- > Development and production testing of petrol and diesel engines
- > Engine component test rigs
- > Electric motor testing
- > Educational rigs
- > Gearbox test rigs

### DESCRIPTION

The Air Gap range of Eddy Current machines has been designed to be compact, robust and easily maintained. Each dynamometer is fitted with oil injected half couplings at both ends of a non-magnetic stainless steel shaft which is supported in grease lubricated, deep groove ball bearings. The dynamometer casing houses twin magnetising coils that produce a controllable magnetic field which absorbs the applied torque. Heat generated in this process is dissipated by cooling water running through grooved loss plates. These grooves are protected from corrosion by electroplated inner surfaces. Rotation of the casing is resisted by a precision strain gauge load cell which gives an accurate measurement of torque.

### SPECIFICATION

The standard AG dynamometer range extends from 30 kW to 750 kW at speeds up to 12,000 rpm and can absorb power in either direction of rotation.

Torque measurement accuracy is  $\pm 0.25\%$  of full rated torque of the dynamometer. The speed is measured by a pulse pickup operating with a 60 tooth wheel and gives accuracy of  $\pm 1$  rpm.

Froude dynamometers are painted traffic blue RAL 5017.

### OPTIONS

- > High speed versions up to 14,000 rpm
- > Calibration equipment
- > Shaft bearing thermocouples
- > Cooling water inlet filter
- > Terminal box electrical connector
- > Drive end water connections
- > Paint colour

### PERIPHERALS

- > Dynamometer and engine controllers
- > Data acquisition systems including automatic test sequence control and graphical user interface

### CUSTOMER SERVICE AND SUPPORT

- > Facilities planning and installation service
- > Comprehensive in-house and/or on-site training for customer engineering, operator and maintenance personnel
- > Tailored preventative maintenance contracts
- > Technical helpline support

Froude maintains a policy of continuous research and development and specifications are subject to alteration without notice.

### AG DYNAMOMETER PERFORMANCE CHARACTERISTICS

Size	Max. Power kW (BHP)	Max. Torque Nm (Lb.ft)	max. Speed (rpm)	
			STD	HS
AG30	30 (40)	95 (70)	12,000	14,000
AG80	80 (105)	160 (118)	9,000	14,000
AG200	200 (270)	800 (590)	8,000	n/a
AG350	350 (470)	1,500 (1,120)	9,000	n/a
AG500	500 (670)	3,000 (2,210)	7,500	n/a
AG750	750 (1,010)	4,500 (3,320)	4,000	5,500

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